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10/597,142

07/12/2006

Zeev Harel

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7590

06/26/2008

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EXAMINER

KIKNADZE, IRAKLI

ART UNIT

PAPER NUMBER

2882

NOTIFICATION DATE

DELIVERY MODE

06/26/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

skelleher@kelleherip.com

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/597,142 | <b>Applicant(s)</b><br>HAREL ET AL. |  |
|                              | <b>Examiner</b><br>IRAKLI KIKNADZE   | <b>Art Unit</b><br>2882             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 7/17/2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/12/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 16 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16 and 20 claim both a method and apparatus.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). Fig. 11 disclosed in specification is missing. The drawings must show every feature of the invention specified in the claims. Therefore, the Cell-X detector (see claims 14, 18 and 20) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

4. Claims 1-20 are objected to because of the following informalities:

5. Claims 1, on line 2, the recitation “interest (VOI) comprising;” should read --interest (VOI) comprising:--.

Claim 15, on line 2, the recitation “the steps of;” should read --the steps of:--.

Claim 16, on line 2, the recitation “the steps of” should read --the steps of:--.

Claims 2-24 and 17-10 are objected by virtue of their dependence.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-13, 15-17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hussein et al. (US Patent 5,600,303).

With respect to claim 1, Hussein teaches a remote XRD means for identifying a material in a volume of interest (VOI) comprising:

a plurality of N X-ray sources targeted towards said VOI; wherein N is an integer number equal to or higher 1;

a plurality of M X-ray detectors adapted to receive diffracted X-rays so an image comprising at least a portion of the obtained XRD patterns is obtained; wherein M is an integer number equal to or higher 1; a processor adapted to measure said patterns; a database comprising records of patterns' parameters characterizing predetermined materials; a database comprising records of materials that a notification should be provided when identified; and, alerting means adapted to alert wherein the identified material is one of the predetermined group (column 13, line 66- column 14, line 20; column 19, lines 30-35; column 21, lines 1-51; column 24, lines 50-63; column 37, lines 48-62).

With respect to claim 2, Hussein teaches that the material is selected from at least one of the group of explosives, flammable, toxic, chemical and biological warfare substances in either gas, liquid or solid states, spores, drugs and narcotics, radioactive agents or a combination thereof (column 22, lines 10-15).

With respect to claim 3, Hussein teaches that the VOI is a metallic material (column 33, lines 11-24).

With respect to claim 4, Hussein teaches that the material is being transferred on a passenger and/or in his carry-on luggage (column 37, lines 49-63).

With respect to claim 5, Hussein teaches that the XRD is any technique adapted for calculating the diffraction pattern obtained by X-ray scattering of the material (column 38, lines 14-29).

With respect to claim 6, Hussein teaches that the XRD is any technique adapted for calculating the diffraction pattern or energy profile obtained by X-ray back scattering of the material (column 38, lines 14-29).

With respect to claim 7, Hussein teaches that the X-ray detector is a 2D detector (column 18, line 31).

With respect to claim 8, Hussein teaches that the processor is adapted to measure at least a portion of the XRD patterns (column 22, lines 10-15 and column 24, lines 55-64).

With respect to claim 9, Hussein teaches that the processor is adapted to measure the central portion of the XRD patterns (column 22, lines 10-15 and column 24, lines 55-64).

With respect to claim 10, Hussein teaches that the XRD means are adapted to identify moving VOIs (column 19; lines 36-45).

With respect to claim 11, Hussein teaches that the XRD means are adapted to identify sampled moving VOIs; additionally comprising means to sample VOI so the presence of the VOI is notified; and means to surveillance or follow up the VOI before identifying its nature (column 19; lines 36-45 and column 20, lines 9-25).

With respect to claim 12, Hussein teaches that the XRD means are adapted for online surveillance or follow up (column 20, lines 9-25).

With respect to claim 13, Hussein teaches that the alerting means are adapted to alert either online or offline, to alert to a predetermined remote location, to be in communication with effective means adapted to isolate or immobilize the VOI transport until subsequent notification or any combination thereof (column 20, lines 9-25).

With respect to claims 15 and 16, Hussein teaches a method for acquiring XRD image of a material in a VOI, comprising the steps of: receiving VOI coordinates from lower stage system; irradiating the material in the VOI; acquiring of XRD patterns; extracting of XRD patterns; converting the XRD patterns of VOI to standard powder X-ray diffraction spectrum; searching and/or matching records in a database for material identification; and then, alerting in case said material is in matching a predetermined record (column 13, line 66- column 14, line 20; column 19, lines 30-35; column 21, lines 1-51; column 24, lines 50-63; column 37, lines 48-62).

With respect to claim 17, Hussein teaches that the back-diffraction is provided (column 38, lines 16-29).

***Claim Rejections - 35 USC § 103***

8. Claims 14, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hussein et al. (US Patent 5,600,303) as applied to claims 1, 15 and 16 above, and further in view of Hopkins et al. (US Patent Application Publication 2006/0067471 A1).

9. With respect to claims 14, 18 and 20 Hussein teaches claimed invention except for detector adapted for acquiring both image and information about its energy profile.

Hopkins teaches a detector adapted for acquiring both image and information about its energy profile (see paragraphs 0010 and 0011; claim 15) providing user with the capabilities to improve detection efficiency and provide excellent signal-to-noise performance and coverage (see paragraph 0002). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the detector adapted for acquiring both image and information about its energy profile as suggested by Hopkins in the method and apparatus of Hussein, since such a modification would provide user with the capabilities to improve detection efficiency and provide excellent signal-to-noise performance and coverage.



***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to IRAKLI KIKNADZE whose telephone number is (571)272-2493. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Irakli Kiknadze/  
Primary Examiner, Art Unit 2882  
/I. K./  
June 16, 2008

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